NOT FOR HOME USE

Owner's Manual For:

JARVIS Wellsaw

PORTABLE POWER SAW

MODEL 400

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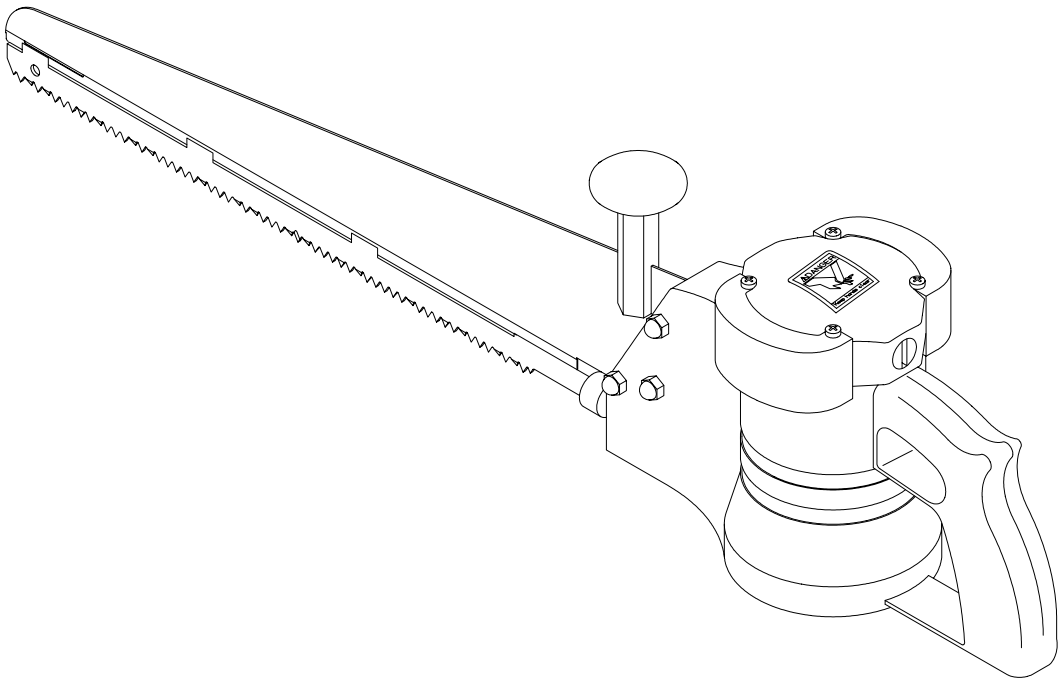

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NOTICE TO EMPLOYER AND SAFETY DIRECTOR

AVOID INJURY

1. **Remove** and **repair** any tool that malfunctions. **All** personnel must be instructed to remove any malfunctioning equipment.
2. **Ensure** that all employees who use this tool are trained in the proper use of this tool and are aware of the dangers that may arise if they do not follow the procedures outlined in this brochure.
3. Enclosed are four (4) copies of **"NOTICE TO OPERATORS, MAINTENANCE AND CLEAN-UP PERSONNEL."** Post one copy on the employees' bulletin board; give one copy to operator(s); give one copy to the maintenance foreman; and give one copy to the sub-contract cleanup / internal cleanup foreman. *Additional copies will be provided upon request.*
4. The tool is designed and intended to be powerful. That fact should be obvious to your employees, but you must emphasize it to them.
5. **Never** make modifications or alterations to the tool. *Replace any missing or illegible labels.*
6. **Always** disconnect the tool from its power supply when it is not in use.
7. **Follow** our installation and maintenance instructions for proper installation and care of the tool.
8. **Ensure** that employees wear eye protection in accordance with OSHA's eye and face protection requirements (29 CFR 1910.133) at all times.
9. **Hand/Wrist/Arm** injury and other Cumulative Trauma Disorders may result from repetitive work, motion or vibration. You must make your employees aware of hazards, symptoms of injury and appropriate prevention. See OSHA's "Ergonomics Program Management Guidelines for Meatpacking Plants."
10. **Avoid** injury. Do not permit the tool to be misused.
11. **If** you **resell** or **distribute** a Jarvis product, you must provide the purchaser with the appropriate safety sheets and tool brochure. *Additional copies of safety sheets and tool brochures will be provided upon request.*

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NOTICE TO OPERATORS, MAINTENANCE AND CLEANUP PERSONNEL

REMOVE ANY MALFUNCTIONING TOOL FROM SERVICE
REPORT ANY PROBLEMS TO YOUR SUPERVISOR

1. **Always** wear eye protection in accordance with OSHA's eye and face protection requirements (29 CFR 1910.133), and when needed, a dust mask.
2. **Do not** operate near flammable liquids or in gaseous atmospheres.
3. **Do not** operate in outdoor locations or in damp or wet locations.
4. **Do not** overreach; keep proper footing and balance when using the tool.
5. **Disconnect** the power supply in accordance with OSHA's lockout/tagout procedures (29 CFR 1910.147) before changing the blade.
6. **Disconnect** the power supply in accordance with OSHA's lockout/tagout procedures (29 CFR 1910.147) before performing any repair or maintenance.
7. **Disconnect** the power supply – or have the power supply disconnected – in accordance with OSHA's lockout/tagout procedures (29 CFR 1910.147) before performing any cleanup.
8. **Disconnect** the power supply when the tool is not in use.
9. **Never** put fingers, hands or other parts of the body on the cutting edge of the blade or in the cutting path.
10. **Test** the tool prior to use or daily. **Depress** the trigger and the tool should start. **Release** the trigger and the tool should stop. *If the tool malfunctions, remove it from service and report or repair it immediately.*
11. **Never** depress the trigger unless you are going to use or test the tool.
12. **Never** make any alterations to the tool. *Report or replace any missing or illegible labels.*
13. **Always** use both hands when starting and operating the tool to avoid the risk of possible "kick back" or "recoil." Continue holding the tool with both hands until the saw blade comes to a complete stop.

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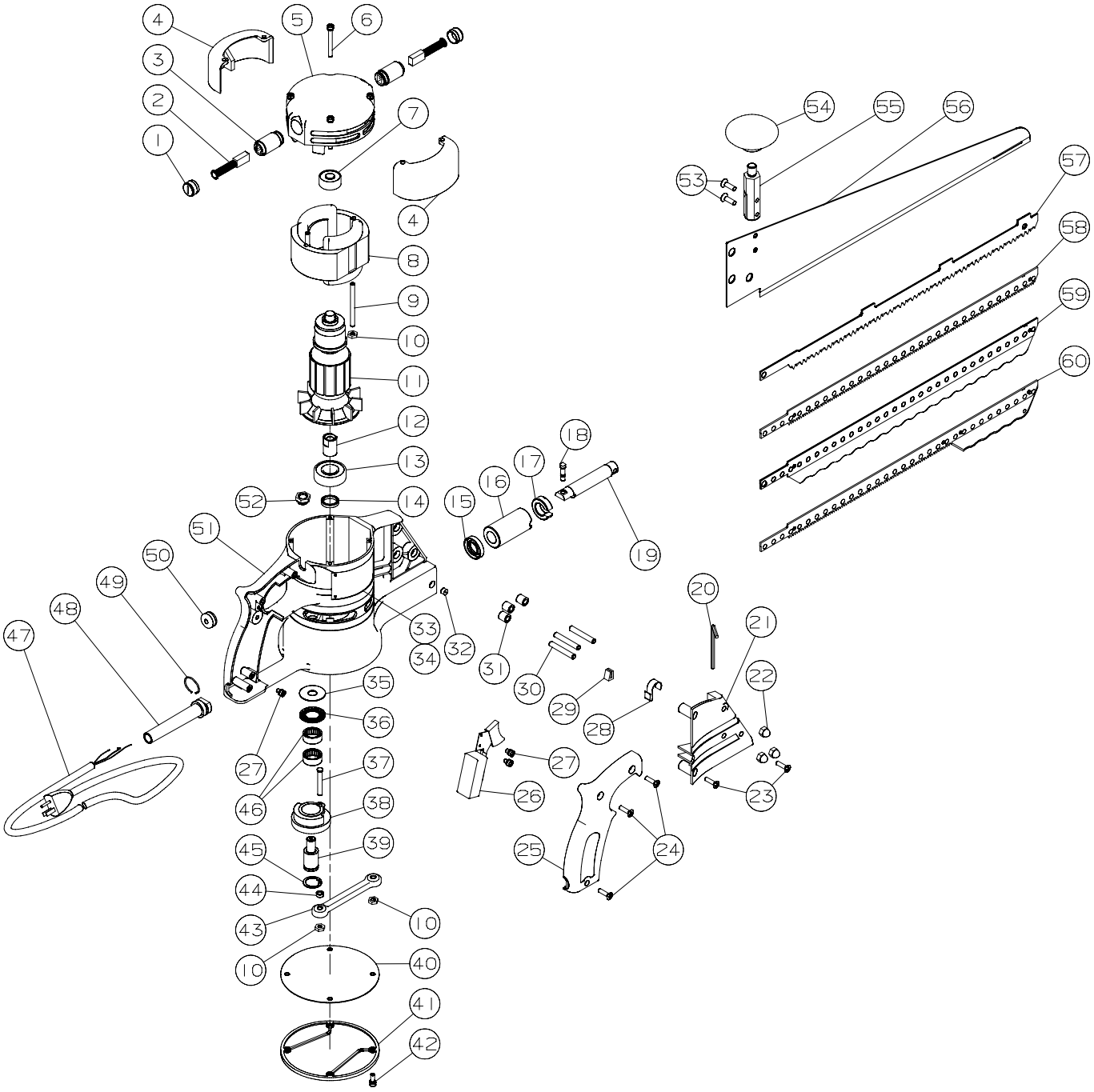

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IT.	JARVIS PART NO.	OLD PART NO.	PART NAME	QTY
1	1063112	501022-005	Brush Cap	2
2	1063111	501022-004	Brush and Spring	2
3	1063110	501022-003	Brush Holder	2
4	1015006	501174	Deflector	2
5	1002191	501002	Top Cap	1
6	1055428	100101-004	Screw, Flat Head Phil	4
	1055427	100101-002	Screw, Set of 12	
7	1021215	100243-003	Ball Bearing	1
8	1063119	501224-003	Stator 115V	1
	1063120	501224-004	Stator 230V	1
9	1027040	501021	Stator Stud	2
10	1007164	100105-001	Locknut	4
11	1063117	501224-001	Armature 115V	1
	1063118	501224-002	Armature 230V	1
12	1026072	501225	Pinion Gear	1
13	1021227	100422-004	Ball Bearing	1
14	1035193	501120-001	Seal	1
15	1035192	501103	Seal	1
16	1036116	501171	Bushing	1
17	1036117	501186	Bushing Spacer	1
18	1027041	501046	Rod Stud	1
19	3065009	501058	Push Rod and Stud	1
20	8030031	100099-001	Hex Key	1
21	1002192	501003	Blade Support Clamp	1
22	1007162	100022-006	Cap Nut	6
23	1055439	100102-002	Screw	2
24	1054076	501380	Coated Screw	3
25	1002203	501004-002	Handle Cover	1
26	1005038	100739-001	Switch	1
27	1055454		Screw, Round Head	3
	1055438	100101-003	Screw, Set of 12	
28	1012046	501042	”S” Clip	1
29	1012047	501043	“U” Clip (rubber)	1
30	1027048	501272	Stud	3
31	1036120	501273	Insert	3
32	1055424	100035-002	Set Screw	1
33	1017030	501023	Info Label 115V, English	1
	1017031	501084	Info Label 230V, English	1
	1017052		Info Label 115V, French	1
	1017235		Info Label 230V, French	1
34	1054173		Label Retaining Screw	4
	1045013	100131-001	Label Retaining Rivet	4
35	1004149	100426-001	Thrust Bearing Race	1
36	1021218	100425-001	Needle Thrust Bearing	1
37	1027043	501081	Drive Stud	1
38	3026024	501223	Gear and Drive Stud	1
39	1020133	501377	Gear Stud	1
40	1035191	501008	Gasket	1
41	1002193	501005	Bottom Plate	1
42	1055452		Screw, Flat Head Phil	4
	1055426	100101-001	Screw, Set of 12	
43	3028030	501053	Connect. Rod & Brg	1
44	1029185	501082	Spacer	1
45	1013310	100069-013	Snap Ring	1
46	1021216	100424-001	Needle Bearing	2
47	3001008	501337	Cord and Plug 115V	1
	3001011	501337	Cord and Plug 230V	1
48	1063125	501294	Strain Relief	1
49	1013137	501295	Clamp Ring	1

IT.	JARVIS PART NO.	OLD PART NO.	PART NAME	QTY
50	1063109	100647	Grommet	1
51	1016213	501001-005	Housing	1
52	1007166	501376	Gear Stud Nut	1
53	1055429	100102-003	Screw	2
54	1006021	501066	Knob	1
55	1027042	501065	Handle Stud	1

blades, blade supports and accessories

IT.	JARVIS PART NO.	OLD PART NO.	PART NAME	QTY
56	1058065	501007T	Blade Support 8 inch	1
	1058069	501071	Blade Sup. 8” depth gage	1
	1058066	501058T	Blade Support 16 inch	1
	1058097		Blade Support 24 inch	1
57	1023122	501246	Blade, 8 inch (4 TPI)	1
	1023121	501247	Blade, 16 inch (4 TPI)	1
58	1023125	501104	Blade 8 inch (8 TPI)	1
	1023126	501108	Blade 8 inch (12 TPI)	1
	1023127	501116	Blade 16 inch (8 TPI)	1
59	1023128	501151	Blade 8 inch (knife)	1
	1023129	501155	Blade 16 inch (knife)	1
	1023166		Blade 24 inch (knife)	1
60	1023120	501121	Blade 16 inch (combo)	1
	3058037	501352-002	Depth Gage Assembly	

replacement kits

IT.	JARVIS PART NO.	OLD PART NO.	PART NAME
	3063010	501351-001	Armature & Bearing without Pinion Gear 115V
	3063011	501351-002	Armature & Bearing without Pinion Gear 230V
	3063007	501235-001	Armature & Bearing with Pinion Gear 115V
	3063008	501235-002	Armature & Bearing with Pinion Gear 230V
	3063013	501232	Armature & Pinion 115V
	3063014	501233	Armature & Pinion 230V
	3001008	501006	Cord Assembly 115V
	3001010	501089	Cord Assembly 230V
	3026023	501088	Gear & Bearing Assembly
	3016118	501168-001	Housing, Seals & Bushing

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SPECIFICATIONS

Motor Power	1 hp	745 W
Operating Volt/Amp	230V/7.5A, 1 phase, 50/60 Hz 115V/15A, 1 phase, 50/60 Hz	
Stroke	1.13 in	29 mm
Blade Speed	8000 strokes / min	
Control Handle	Single Trigger	Electric
Blade Length	8 in	203 mm
	16 in	406 mm
Overall Length (16 in blade)	32 in	813 mm
Weight (without blade)	9.8 lbs	4.5 kg

INSTALLATION INSTRUCTIONS

These instructions have been prepared to assure you of satisfactory operation through proper use of your **Jarvis** Wellsaw.

Read them carefully and keep them for future reference.

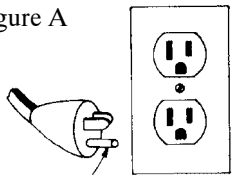
POWER SUPPLY

Your **Jarvis** Wellsaw operates on 50 or 60 Hz., single phase alternating current. Its voltage rating is indicated on the name plate (either 115 or 230 Volt). If an extension cord is to be used, be sure that the wire size is adequate to maintain full line voltage to the tool.

GROUNDING

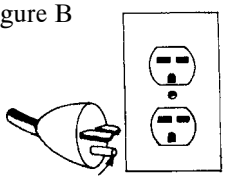
Your **Jarvis** Wellsaw should be grounded to prevent the user from electric shock or **electrocution**. The **Jarvis** Wellsaw is equipped with an approved three conductor cord and three prong grounding-type plug to fit the proper grounding-type receptacle. The green conductor in the cord is the grounding wire. Never connect the green wire to a live terminal. If your **Jarvis** Wellsaw is the 115 volt model, it has a plug that looks like figure "A". If your **Jarvis** Wellsaw is the 230 volt model, it has a plug that looks like figure "B".

figure A



grounding blade

figure B



grounding blade

Do not use any adapters with the **Jarvis** Wellsaw

EXTENSION CORDS

Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your **Jarvis** Wellsaw will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. The table below shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

Minimum Wire Gage for Extension Cords

Volts	Total Length of Cord in Feet			
120	0-25	26-50	51-100	101-150
240	0-50	51-100	101-200	201-300

Amp Rating	Wire Size (AWG)			
0-6	18	16	16	14
6-10	18	16	14	12

When tool is used outdoors, use only extension cords labeled for outdoor use.

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GENERAL SAFETY INSTRUCTIONS
For Operators, Employers and Maintenance Personnel

WARNING: When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following:

Working Precautions:

1. **READ ALL INSTRUCTIONS.**
   - Know your **Jarvis** Wellsaw and understand safety notices, manuals and instructions in the literature provided. Become familiar with the **Jarvis** Wellsaw, its dangers, limitations and applications.
2. **INSTALL THE TOOL PROPERLY.**
   - Ground the tool. See instructions provided in the installation section of this manual.
   - Use the proper extension cord. See instructions provided in the installation section of this manual.
3. **USE THE RIGHT TOOL AND ATTACHMENTS.**
   - Select the proper tool to do the job. The **Jarvis** Wellsaw is designed for meat and bone cutting; wood cutting; non-woven and geo-textile cutting. Do not use the **Jarvis** Wellsaw for non-intended purposes.
4. **KEEP WORK AREAS CLEAN AND WELL LIT.**
   - Cluttered, oily and poorly lit work areas invite accidents.
   - Keep visitors a safe distance from the work areas.
5. **AVOID DANGEROUS ENVIRONMENTS.**
   - Do not expose the power tool to rain.
   - Do not use the tool in presence of flammable liquids or gases.
6. **WEAR PROPER APPAREL.**
   - Avoid being pulled by moving parts of the **Jarvis** Wellsaw. Do not wear loose clothing or dangling objects. Restrain long hair.
   - Wear safety glasses when operating the tool.
7. **MAINTAIN THE JARVIS WELLSAW AND ACCESSORIES WITH CARE.**
   - Keep the **Jarvis** Wellsaw sharp and clean for the best and safest performance.
   - Follow the instructions for lubricating and changing the blades.
   - Inspect the **Jarvis** Wellsaw regularly. If the **Jarvis** Wellsaw is malfunctioning, remove it from service and report any problems to your supervisor immediately.
   - Keep the handles dry, clean and free from oil and grease.
8. **STAY ALERT.**
   - Watch what you are doing and use common sense.
9. **SAVE THESE INSTRUCTIONS.**

OPERATION INSTRUCTIONS

Before starting regular operation of the **Jarvis** Wellsaw, we recommend that you make a few cuts with a fine pitch blade to acquaint yourself with the operation of the tool before using any of the coarser blades.

A. AVERAGE CUTTING AND RIPPING:

1. Place your work piece on a solid support at a convenient working height.
2. Adjust the material so that the line of cut will be close to the support. Secure it firmly.
3. To prevent starting torque of the motor from pulling the saw away from line of cut, the operator should make a few short strokes until the blade has cut into the material about 1/4 inch before squeezing trigger switch.
4. **Both hands should be on the saw at all times while cutting. Continue holding the tool with both hands until the saw blade comes to a complete stop.**
5. The saw should be kept at a 90 degree angle to the work piece while cutting material that is thicker then 1 inch. For thin materials a 12-tooth blade and a 30 degree cutting angle are recommended.
6. The saw should be pushed firmly into the material while cutting.
7. Do not allow the saw blade or the blade support to leave the work piece while cutting.
8. Never allow the saw blade to float into material while cutting.
9. Never permit any part of the saw, except the blade or the blade support, to contact the work piece during the cut.

B. LARGE CROSS SECTIONS:

1. Rocking the saw in the cut will speed up the cutting action. An 8-tooth blade is recommended.

C. SINKING THE BLADE THROUGH A SURFACE:

1. Your power hand saw is <u>not designed</u> for regular use in starting its own hole by sinking blades through a surface, commonly called “plunge cutting”. If attempted, the operator must:
   a. Keep the saw blade as parallel to the work as possible.
   b. Immediately, as the blade makes contact with the work piece, start to draw the saw back slowly from the starting point.
   c. Repeat the operation outlined in “b”, if necessary.
   d. Have room to draw the saw at least 4-6 inches before cutting through a 1 inch thickness.
   e. Do not force the saw blade, but keep it moving slowly on the draw back from the starting point. After the break through cut has been made and the end of the blade support extends through the material at least 1-1/2 inches, the saw may be tipped to a normal cutting angle.

D. NOT FOR CUTTING METAL:

1. Due to the blade speed and design, your **Jarvis** Wellsaw is not for cutting metal.

E. NOT FOR CUTTING SMALL RADII:

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F. HEAVY AND CONTINUOUS WOOD CUTTING:

1. For heavy or continuous wood cutting, lubricate the blade grove with oil or **Jarvis** Wellsaw lubricant 1062023.
2. When cutting wet or gummy wood or other material where there is a tendency for a deposit to build up on the sides of the blades, use a 50-50 mixture of kerosene and lubricating oil and place it on the sides of the blade and the blade support.

G. ALWAYS KEEP A SHARP BLADE ON THE SAW:

1. Cutting with a dull or badly worn blade can overload the saw and cause damage from overheating.
2. New blades can be purchased from **Jarvis.**

MAINTENANCE INSTRUCTIONS

Always disconnect the saw from its power supply before performing any maintenance.

Item numbers: refer to the parts diagram on page 4.

A. LUBRICATION:

1. The gear case should be kept 1/3 full of grease. To check the grease level, remove the bottom plate (item 41) and its gasket (item 40). It should be checked every thirty days for saws that are used moderately and every two weeks for saws that are used daily. If replacement grease is required it should be obtained from **Jarvis**.

B. BLADE SUPPORT INSTALLATION:

1. Tap (3) inserts (item 31) gently into the bores on blade support clamp (item 21).
2. Align the blade support clamp onto saw housing (item 51), making sure the inserts stay in place.
3. Assemble (3) studs (item 30) with cap nuts (item 22) and place them through the saw housing and the blade support clamp.
4. Draw down all (3) cap nuts evenly until the inserts are bottomed out into the saw housing.
5. Remove the cap nuts and the blade support clamp. The inserts should now be properly set into the saw housing.
6. Assemble blade support (item 56) over the inserts on the saw housing. Place the blade support clamp on the saw housing and fasten with the studs, the cap nuts and phillips screws (item 23).
7. Install handle stud (item 55) using two larger phillips screws (item 53).

C. BLADE REMOVAL:

NOTE: Your **Jarvis** Wellsaw is equipped with a hex key (item 20) for removing the blade. This wrench is located in the housing directly behind the blade support knob (item 54).

1. Insert the hex key through the hole in the outer end of blade (item 57, 58 or 59) and pull the blade to the outer end of the stroke.
2. Loosen the blade holding set screw (item 32) about 1/2 turn. *The set screw must be loosened through the hole in the housing.*
3. Reinsert the hex key in the hole at the outer end of the blade and pull the blade out.

D. BLADE INSTALLATION:

1. Insert hex key (item 20) into set screw (item 32).
2. Fasten the set screw (through the hole in housing) into the hole in the end of push rod (item 19). *The hole in the housing must be aligned with the hole in the push rod for the set screw to be fastened. (It may be necessary to turn the armature fan to adjust the push rod properly).* Do not tighten.
3. Align blade (item 57, 58 or 59) with blade support (item 56). *The blade should extend approximately 3 inches from the end of the blade support.*
4. Slide the blade onto the blade support until the crimp in the blade is touching the end of the blade support.

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5. Use a rubber hammer and tap the end of blade towards the body of the saw until the crimp in the blade slides into the slot in the blade support.
6. Slide the blade into the push rod as far as it will go.
7. Tighten set screw (item 32) with the hex key. The set screw must be fully tightened before running the saw or damage to the saw will occur.

E. GENERAL DISASSEMBLY:

1. Remove blade (item 57, 58 or 59) and blade support (item 56).
2. Remove handle cover (item 25).
3. Remove switch (item 26). Remove the top two wires by inserting a 1/16 inch diameter pin punch directly adjacent to the stator wires.
4. Remove brush cap (item 1) and brushes (item 2).
5. Remove deflectors (item 4).
6. Remove top cap (item 5) - stator (item 8) will be attached.
7. Remove armature (item 11). Hold the armature in one hand and tap housing (item 51) with a rubber hammer with the other hand to loosen the armature. *(Pinion gear - item 12 - on armature has a left hand thread).*
8. Remove bottom plate (item 41) and gasket (item 40).
9. Insert a small block of wood between the connecting rod (item 43) and the housing (item 51) to stop the rotation of the connecting rod. Remove lock nuts (item 10). Remove the connecting rod.
10. Using a 5/16 inch hex key, loosen gear stud (item 39) - *left hand thread*. Be sure not to spin gear stud nut (item 52). Remove items 35-39, 45 and 46.
11. Remove the push rod and stud (item 19) through the center of the housing.
12. Clean the gear housing cavity to remove any contaminated lubricant.
13. Remove and replace any faulty parts and reassemble by reversing these steps.

NOTE (<u>when reassembling</u>):

a. Step 10: Use *Loctite 271* on gear stud nut (item 52) before fastening gear stud (item 39).

b. Step 7: Reassemble armature (item 11) in housing (item 51) by using a center punch to tap the armature until its bearing is fully seated.

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